

(1) Number of pages _____

(2) Date of repair _____

(3) Initials of the Referencer _____

MADRAS RECORD OFFICE

Government of Madras

Public Works DEPARTMENT

G.O. No. <i>2034</i>	Press _____
B.P. No. _____	Mis. _____
Dated <i>17-7</i> <i>1955</i>	<i>1955</i>

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
17th July 1875.*

Read the following papers:—

No. 442. From Colonel C. V. WILKIESON, R.E., Superintending Engineer, Coimbatore, to Colonel G. W. WALKER, R.E., Secretary to Government, Public Works Department, dated Coonoor, 15th March 1875, No. 155.

ADVERTING to G. O., No. 2,720, dated 24th September 1874, I have the honor to submit, for sanction and provision of funds, a survey and estimate for widening the Ponachy bridge path to 12 feet from the Ponachy saddle to the foot of the Annamallai Hills, bridging Chinnaur and Chinna Chinnaur, and providing drains at all smaller stream crossings, amounting to Rupees 68,000, as shown below:—

	RS.
I.—Widening road	49,850
II.—Timber bridge across Chinnaur stream of three vents each of 25 feet span	4,600
III.—Do. do. Chinna Chinnaur of one vent of 25 feet span ...	1,850
IV.—Nine culverts of two vents of 6 feet span each at 180 Rs. ...	1,620
V.—43 Do. of 6 feet span at 110 Rupees ...	4,730
VI.—107 Do. of one vent of 3 feet span at 50 Rs. ...	5,350
Total ...	68,000

No. 443. From Colonel C. V. WILKIESON, R.E., Superintending Engineer, Coimbatore, to Lieutenant-Colonel J. MULLINS, R.E., Officiating Secretary to Government, Public Works Department, dated Coonoor, 14th June 1875, No. 39.

With reference to your memorandum, No. 24, dated 27th May 1875, I have the honor to forward four plans and five estimates, amounting in the aggregate to Rupees 18,150, for constructing the undermentioned bridges and tunnels on the road from Ponachy saddle to the foot of the Annamallai Hills:—

	RS.
1. Constructing a timber platform bridge of three vents each of 25 feet span	4,400
2. Do. do. do. of one vent of 25 feet do. ...	1,870
3. Do. 9 tunnels of two vents of 6 feet at 200 Rupees each ...	1,800
4. Do. 43 tunnels of one vent of 6 feet at 110 Rupees each ...	4,730
5. Do. 107 do. of one vent of 3 feet at 50 Rupees each ...	5,350
Total ...	18,150

Proceedings of the Madras Government, Public Works Department,
17th July 1875.

PROVINCIAL.

COMMUNICATIONS.

NEW WORKS.

No. 43 of 1874-75.

Estimate for widening the Ponachy Bridle path to 12 feet from the Ponachy Saddle to the foot of Annamallai Hills in No. 1. Coimbatore Range, Coimbatore District.

Distance of the road, 6 miles 2 furlongs and 45 yards.

Contents.	Particulars.	Rate.	Per.	Amount.	Total.
		RS. A. P.		RS. A. P.	
23,843½	Cubic yards of earthwork, cutting, widening and filling the road ..	0 2 0	C.yd.	2,980 7 4	
7,172	" of gravel work	0 3 0	"	1,344 12 0	
8,600½	" of rocky soil	0 4 0	"	2,150 2 4	
7,387½	" of quarrying loose rock	0 5 0	"	2,308 7 11	
22,422½	" of blasting rock	1 8 0	"	33,631 6 6	
6,700½	" of revetment	0 12 0	"	5,025 3 9	
				47,443 7 10	
	Sundries, &c....	...	...	2,406 8 2	
	Total ...	...	...	...	49,850
<i>Constructing a Timber Bridge across Chinnaur stream on the Ponachy Ghaut.</i>					
425	Cubic yards of rough-stone in chunam	3 0 0	C.yd.	1,275 0 0	
4½	" of cut-stone work	15 0 0	"	70 0 0	
558	Cubic feet of teakwood wrought and put up	2 8 0	C.ft.	1,395 0 0	
395	" of junglewood wrought and put up with nails and tarring.	2 0 0	"	790 0 0	
413½	Cubic yards of earthwork, hard	0 6 0	C.yd.	155 0 0	
	Scaffolding	...	"	150 0 0	
	Baling water	...	"	100 0 0	
				3,935 0 0	
	Sundries, &c....	...	...	465 0 0	
	Total ...	...	...	...	4,400
<i>Constructing a bridge across the stream on the Ponachy Ghaut, 5 miles 169 yards, from foot.</i>					
236½	Cubic yards of rough-stone in chunam.	3 0 0	C.yd.	710 0 0	
186	Cubic feet of teakwood wrought and put up	2 8 0	C.ft.	465 0 0	
136½	" of junglewood wrought and put up including nailing and tarring	2 0 0	"	272 7 0	
3½	Cubic yards of cut-stone work	15 0 0	C.yd.	52 8 0	
367	" of earthwork, hard	0 6 0	"	137 10 0	
	Scaffolding	...	"	60 0 0	
				1,697 9 0	
	Sundries including baling water, &c....	...	...	172 7 0	
	Total ...	...	...	...	1,870

Proceedings of the Madras Government, Public Works Department,
17th July 1875.

Contents.	Particulars.	Rate.	Per.	Amount.	Total.
		RS. A. P.		RS. A. P.	
206	Constructing 9 Tunnels of two vents of 6 feet on the Ponachy Ghaut.				
93	Cubic yards of earthwork	0 2 0	C.yd.	25 12 0	
9	" of dry stone work	0 12 0	"	69 12 0	
	" of covering stones	10 2 0	"	91 2 0	
	Sundries, &c. ...			186 10 0	
				13 6 0	
	Total for one tunnel			200 0 0	
	Total for 9 tunnels				*1,800
120	Constructing 43 Tunnels of two vents of 6 feet on the Ponachy Ghaut.				
59½	Cubic yards of earthwork	0 2 0	C.yd.	15 0 0	
4½	" of dry stone work	0 12 0	"	44 6 0	
	" of covering stones	10 2 0	"	45 9 0	
	Sundries, &c....			104 15 0	
				5 1 0	
	Total for one tunnel			110 0 0	
	Total for 43 tunnels				+ 4,730
45	Constructing 107 Tunnels of one vent of 3 feet on the Ponachy Ghaut.				
22½	Cubic yards of earthwork	0 2 0	C.yd.	5 10 0	
2½	" of dry stone work	0 12 0	"	17 12 0	
	" of covering stones	10 2 0	"	25 5 0	
	Sundries, &c. ...			48 11 0	
				1 5 0	
	Total for one tunnel			50 0 0	
	Total for 107 tunnels				± 5,350
	Grand Total				68,000
	Deduct amount disallowed				6,155
	Balance as sanctioned in this G. O...				61,845

* The amount sanctioned as per this order is Rupees 900 at 100 Rupees each.
+ Do. do. do. 2,150 at 50 Rupees each.
± Do. do. do. 2,675 at 25 Rupees each.

COIMBATORE,
5th June 1875.

(Signed) O. A. HAYNE,

Range Officer.

(") C. V. WILKIESON, Colonel, R.E.,
Superintending Engineer, Coimbatore.

MEMORANDUM.

No. 443-A.

It was remarked by General Walker in regard to this estimate that the drains had been over-estimated both as to size and number, one being provided about every 70 yards, dimensions varying from 3 feet square to single, and double vents of 6 feet each. It was not considered that so much provision for drainage was requisite on this

*Proceedings of the Madras Government, Public Works Department,
17th July 1875.*

kind of ghaut, as much of the water that now crosses it can be diverted by a good channel along the ghaut head, and much turned aside over each zigzag, and it was observed that in several instances provision was made for 6 feet drains within a few yards of zigzags, over which the water might be turned clear of the ghaut.

2. As the minor drains on the Coonoor ghaut cost from 18 to 25 Rupees each, it was proposed to fix the latter amount in this instance for small drains, and Rupees 50 and Rupees 100 each for the larger drains. The cost of the drains would thus stand as follows:—

9 at Rupees 100 =	...	...	...	...	Rupees 900
43 at „ 50 =	...	...	...	...	„ 2,150
107 at „ 25 =	...	...	...	...	„ 2,675
Total					Rupees 5,725

and the estimate would be reduced by Rupees 6,155.

OOTACAMUND, (Signed) J. O. HASTED, Major, R.E.,
30th June 1875. *Officiating Chief Engineer.*

No. 444. ORDER THEREON, 17th July 1875, No. 2,034.

CIVIL WORKS, No. 31.

WITH the above letters the Superintending Engineer, Coimbatore, submits an estimate, amounting to Rupees 68,000,

for widening the bridle path from the Ponachy saddle to the foot of the Annamallai Hills to 12 feet, and bridging all streams.

2. The items of the estimate are as follow:—

	RS.
Widening road	49,850
Bridge over Chinnaur	4,400
Do. over Chinna Chinnaur	1,870
9 Tunnels of two vents at Rupees 200 each	1,800
43 Tunnels of two vents at Rupees 110 each	4,730
107 „ of one vent „ 50 „	5,350

3. If the three last items are reduced as suggested by the Chief Engineer, the amount of the estimate will be reduced to Rupees 61,845 at which it is sanctioned.

4. As no funds are now available for the work, application must be made for an allotment in the Provincial Budget for 1876-77.

(True Extract.)

(Signed) J. O. HASTED, Major, R.E.,
Officiating Joint Secretary to Government.

To the Superintending Engineer, Coimbatore.
„ Controller of Public Works Accounts.
„ Revenue Department.
„ Financial Department.

Exd. E. C. Shunker,
Spare Copies

2

Remarques.

49850 - 49851

68000

Leaves of Fern

Charles C. Smith

Bronght down 2409 1/2 7136 8414 1/2 7292 3/8 22360 3/8 6694 3/8

36
Saddle every black

36 1 1/2 3/4 40 1/2 " " " " South work
98 1 1/2 1/2 73 1/2 " " " " do do
24 1 1/2 1/3 12 " " " " do do
24 1 1/2 3/4 27 " " " " do do

Colours white of saddle leather

28 1 1/2 1/3 14 " " " " do do
2 1 1 1 " " " " 2 1/2 " "

46 1 1/2 3/4 57 3/4 " " " " Buck blocking
24 1 1/2 1 " 36 1/2 " " " " South western rug

Colours white of saddle leather

36 1 1/2 3/4 40 1/2 " " " " do do
20 1 1/2 1/2 15 " " " " do do

11045 1 1 11045 " " " " do do
Saddle down from the
saddle to the foot of the saddle.

Sales 23808 1/2 7172 8647 1/2 7292 3/8 22360 3/8 6694 3/8

Shredded. 2409

W. D. Waring
Range Officer

James Cane

Rock blasting	
Do	Do
South work	Do
Rock	Do
Lumpings loose Rock	Do
Shut Rock blasting	Do
Do	Do
South work	Do
Do	Do
Do	Do
Lumpings loose Rock	Do
Rock	Do
South filling	Do
Rock	Do
North	Do
South work	Do
Rock	Do
Lumpings other side of the	Do
Quinn's stream	Do
Shut Rock blasting	Do
Do	Do
Do	Do
Do	Do
Do	Do
Do	Do
Gravel	Do
Rock	Do
Gravel	Do
South work Gravel	Do
South work	Do
Rock	Do
South work	Do

Brought Over — 1806 6842 8563 2700873 1906 68578

Black

Black

5

54

4

2

1

"

"

"

8

"

"

"

"

"

"

"

Black

Black

5

54

4

2

1

"

"

"

8

"

"

"

"

"

"

"

Black

Black

5

54

4

2

1

"

"

"

8

"

"

"

"

"

"

"

Black

Black

5

54

4

2

1

"

"

"

8

"

"

"

"

"

"

"

Black

Black

5

54

4

2

1

"

"

"

8

"

"

"

"

"

"

"

Black

Black

5

54

4

2

1

"

"

"

8

"

"

"

"

"

"

"

Black

Black

5

54

4

2

1

"

"

"

8

"

"

"

"

"

"

"

Black

Black

5

54

4

2

1

"

"

"

8

"

"

"

"

"

"

"

Black

Black

5

54

4

2

1

"

"

"

8

"

"

"

"

"

"

"

Black

Black

5

54

4

2

1

"

"

"

8

"

"

"

"

"

"

"

Black

Black

5

54

4

2

1

"

"

"

8

"

"

"

"

"

"

"

Black

Black

5

54

4

2

1

"

"

"

8

"

"

"

"

"

"

"

Black

Black

5

54

4

2

1

"

"

"

8

"

"

"

"

"

"

"

Black

Black

5

54

4

2

1

"

"

"

8

"

"

"

"

"

"

"

Black

Black

5

54

4

2

1

"

"

"

8

"

"

"

"

"

"

"

Black

Black

5

54

4

2

1

"

"

"

8

"

"

"

"

"

"

"

Black

Black

5

54

4

2

1

"

"

"

8

"

"

"

"

"

"

"

Black

Black

5

54

4

2

1

"

"

"

8

"

"

"

"

"

"

"

Black

Black

5

54

4

21

Brought Over - 1884 3/4 6842 856 3/4 6847 180 1/2 450 1/2

5	8	1 1/2	1 1/2	"	"	"	18	"	"	Quarrying loose Rock.
18	2 1/2	2	"	"	"	"	40	"	"	Do
8	3	2	"	"	"	"	48	"	"	Do
8	3	1 1/2	"	"	"	"	36	"	"	Rock blasting
12	2	1 1/2	"	"	"	"	36	"	"	Quarrying loose Rock.
23	2	1	"	"	"	"	46	"	"	Do

Refined Hauls	Red	Black	20	2 1/2	1	"	"	"	50	"	Rock blasting
			8	3	2	"	"	"	18	"	Quarrying

Fullback	Chymers	Stays side	1	16	4	2	"	"	128	"	Quarrying loose Rock
				16	4	2	"	"	128	"	Do
				12	4	4	"	"	192	"	Quarrying loose Rock
				12	4	3	"	"	144	"	Do
				12	4	1	"	"	48	"	Quarrying loose Rock
				16	5	1 1/2	"	"	120	"	Do
				16	5	2 1/2	"	"	200	"	Quarrying loose Rock
				2	4	1 1/2	"	"	90 3/4	"	Quarrying loose Rock
				2	4	2	"	"	44	"	Quarrying loose Rock
				11	4	28	88	"	"	"	Quarrying loose Rock

Fullback	Black	2	3 1/2	1 1/2	7 1/4	"	"	"	76 1/8	"	Quarrying loose Rock
			3 1/2	4	7 1/2	10 1/2	"	"	"	"	Do
			13 1/2	3 1/4	3 1/4	"	"	"	15 3/4	"	Quarrying loose Rock
			6 1/2	4	2	"	"	"	52	"	Do
			10	2 1/2	1	"	"	"	25	"	Do
			8	2 1/2	3	"	"	"	60	"	Do
			4	1	1	"	"	"	1	"	Do

Fullback	Black	2	3 1/2	1 1/2	7 1/4	"	"	"	76 1/8	"	Quarrying loose Rock
			3 1/2	4	7 1/2	10 1/2	"	"	"	"	Do
			13 1/2	3 1/4	3 1/4	"	"	"	15 3/4	"	Quarrying loose Rock
			6 1/2	4	2	"	"	"	52	"	Do
			10	2 1/2	1	"	"	"	25	"	Do
			8	2 1/2	3	"	"	"	60	"	Do
			4	1	1	"	"	"	1	"	Do
			18	2 1/2	2	"	"	"	65	"	Quarrying loose Rock
			2	1	1/2	"	"	"	1	"	Do
			16	2	2	"	"	"	64	"	Quarrying loose Rock
			16	3	2	"	"	"	96	"	Do
			8	3	1/2	12	"	"	"	"	Quarrying loose Rock
			8	3	1	"	"	"	24	"	Do
			4	3	1 1/2	"	"	"	18	"	Quarrying loose Rock
			15	1 1/2	2	"	"	"	45	"	Do
			10	2	2	"	"	"	40	"	Do
			8	2	3	"	"	"	48	"	Do
			4	2	2	"	"	"	16	"	Quarrying loose Rock
			5	2 1/2	2	"	"	"	25	"	Do

Carried over 1884 3/4 6842 856 3/4 6847 180 1/2 450 1/2

Bought Quarts - 4884 1/2 6785 - 8042 1/2 8053 1/2 1999 6452 1/2

Quartz-Rough Black

4 2 3/4	"	"	"	"	"	"	"	"	"
5 1 1/2 1	"	"	"	"	"	"	"	"	"
12 3 1 1/4	"	"	"	"	"	"	"	"	"
Actual 138 1/2 138 1/2 138 1/2									
12 1 1	"	"	"	"	"	"	"	"	"
1 2 1/2 2	"	"	"	"	"	"	"	"	"
24 2 3/4	"	"	"	"	"	"	"	"	"
2 1 1	"	"	"	"	"	"	"	"	"
24 2 3/4	"	"	"	"	"	"	"	"	"
32 1 1/2 3/4	"	"	"	"	"	"	"	"	"
8 3 1 1/2 3 6	"	"	"	"	"	"	"	"	"
1/4 reduced part	"	"	"	"	"	"	"	"	"

Quarrying loose Rock.

Rock blasting

Quarrying

Do

Rock

Rock

Quarrying loose Rock
Gravel

Gravel
Rock

Loose Rock

Rock blasting here and there
Quarrying loose Rock

Health work

Do

Quarrying loose Rock
Rock blasting

Do Rock for cement

Do blasting

Do

Rock blasting

Do

Do

Health survey

Quarrying loose Rock

Rock blasting

Do

Loose Rock

Rock blasting

Quarrying loose Rock

Rock blasting

Quartz-Rough Black
1884 1/2 1892 1/2 1894 1/2 1896 1/2 1898 1/2 1900 1/2 1902 1/2 1904 1/2 1906 1/2 1908 1/2 1910 1/2 1912 1/2 1914 1/2 1916 1/2 1918 1/2 1920 1/2 1922 1/2 1924 1/2 1926 1/2 1928 1/2 1930 1/2 1932 1/2 1934 1/2 1936 1/2 1938 1/2 1940 1/2 1942 1/2 1944 1/2 1946 1/2 1948 1/2 1950 1/2 1952 1/2 1954 1/2 1956 1/2 1958 1/2 1960 1/2 1962 1/2 1964 1/2 1966 1/2 1968 1/2 1970 1/2 1972 1/2 1974 1/2 1976 1/2 1978 1/2 1980 1/2 1982 1/2 1984 1/2 1986 1/2 1988 1/2 1990 1/2 1992 1/2 1994 1/2 1996 1/2 1998 1/2 2000 1/2

212

Brought Over

11324 $\frac{2}{3}$ 6648 8023 $\frac{1}{2}$ 5754 5769 93 64 82 $\frac{1}{2}$

South Western

Earth underling

Rocky road.

Leaving for all Rock
of the

Earth work

Rock

East. Hilling

Back

180

80

Quarrying local Rock

Do. Do.

Neustadt

Health & Family

Quarry Lake Rock

Rocky soil

100

Barthelme

Do
Craw

James
Roth

18

Heart Mountain

Seattle falling

1847

Deafy Bird

Back

Exchange for 10000 blocks
Hockeyail

James Love North

Grace

Dear young Lord Roper

Leaning over the fence 480-8402 on 10/10/07 6:55 PM

Guille Roule
and Mad.

100

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479
480
481
482
483
484
485
486
487
488
489
490
491
492
493
494
495
496
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521
522
523
524
525
526
527
528
529
530
531
532
533
534
535
536
537
538
539
540
541
542
543
544
545
546
547
548
549
550
551
552
553
554
555
556
557
558
559
560
561
562
563
564
565
566
567
568
569
570
571
572
573
574
575
576
577
578
579
580
581
582
583
584
585
586
587
588
589
590
591
592
593
594
595
596
597
598
599
600
601
602
603
604
605
606
607
608
609
610
611
612
613
614
615
616
617
618
619
620
621
622
623
624
625
626
627
628
629
630
631
632
633
634
635
636
637
638
639
640
641
642
643
644
645
646
647
648
649
650
651
652
653
654
655
656
657
658
659
660
661
662
663
664
665
666
667
668
669
670
671
672
673
674
675
676
677
678
679
680
681
682
683
684
685
686
687
688
689
690
691
692
693
694
695
696
697
698
699
700
701
702
703
704
705
706
707
708
709
710
711
712
713
714
715
716
717
718
719
720
721
722
723
724
725
726
727
728
729
730
731
732
733
734
735
736
737
738
739
740
741
742
743
744
745
746
747
748
749
750
751
752
753
754
755
756
757
758
759
760
761
762
763
764
765
766
767
768
769
770
771
772
773
774
775
776
777
778
779
780
781
782
783
784
785
786
787
788
789
790
791
792
793
794
795
796
797
798
799
800
801
802
803
804
805
806
807
808
809
810
811
812
813
814
815
816
817
818
819
820
821
822
823
824
825
826
827
828
829
830
831
832
833
834
835
836
837
838
839
840
84

[illegible][illegible][illegible]

Brought Over — 1066 1/2 6446 708 1/2 4820 1/2 6109

Rock blasting
Do.

Rock blasting
Do

Do

Loose Rock

Do

Earth foundation

Quarrying loose Rock

Rock blasting

Reinforcement

Earth filling

Quarrying loose Rock
Rock blasting

Reinforcement

Earth foundation
Do filling

Reinforcement

Do filling
Rock blasting

Earth work

Quarrying loose Rock
Earth filling

Do

Rock

Quarrying loose Rock

Rock

Earth foundation

Quarrying loose Rock
Reinforcement

slip & Ramps
shells

8	3	1 3/4	"	"	"	42	"
4	2	1	"	"	"	8	"
24	2 1/2	1	"	"	"	50	"
2	2	1	"	"	"	4	"
9	3	4	"	"	"	108	"
2	1	3/4	"	"	"	1 1/2	"
3	2 1/2	1	"	"	"	7 1/2	"
3	2	1	"	"	"	6	"
20	1	1 1/2	9	"	"	"	"
12	3	1 1/2	"	"	"	54	"
13	3 1/2	2	"	"	"	91	"
13	1	1 3/4	"	"	"	22 3/4	"
13	1	3/4	9 3/4	"	"	"	"
6	1	2	"	"	"	12	"
3	2	2	"	"	"	12	"
34	1 1/4	3 3/4	"	"	"	157 1/2	"

14 ft
6 foot

quills & Ramps

20 Wedged part

16	1 1/4	3 1/2	"	"	"	70	"
16	1 1/2	1	24	12	"	"	"
16	2	3 1/2	112	"	"	"	"
2 1/2	3	3	"	"	"	22 1/2	"
14	2	1	28	"	"	"	"

6	1	1	"	"	"	6	"
---	---	---	---	---	---	---	---

4	2	1 1/2	12	"	"	"	"
---	---	-------	----	---	---	---	---

8	2	1/2	8	"	"	"	"
---	---	-----	---	---	---	---	---

12	2	3/4	18	"	"	"	"
----	---	-----	----	---	---	---	---

1	1	1	"	"	"	18	"
---	---	---	---	---	---	----	---

20	2 1/2	1	"	"	"	50	"
----	-------	---	---	---	---	----	---

2	2	1/2	"	"	"	2	"
---	---	-----	---	---	---	---	---

12	2	1	24	"	"	"	"
----	---	---	----	---	---	---	---

20	1 1/2	1 1/2	"	"	"	45	"
----	-------	-------	---	---	---	----	---

Remainder 1156 1/2 6491 708 1/2 4967 1/2 4857 1/2

1/3

Dr Wright forward.

9577 1/2 6218 7124 5 3379 8 1579 4 6880

Quarrying loose Rock

✓ 1576	20	3	2 1/2	"	"	150	"	"	As	As
✓ 1572	16	3	2	"	"	96	"	"	As	As
✓ 1574	2	3 1/2	2	"	"	14	"	"	As	As
✓ 1576	2	2 1/2	1 1/8	"	"	5 3/8	"	"	As	As
✓ 1577	1	3	1	"	"	3	"	"	As	As
✓ 1578	13	3	1 3/4	"	"	68 1/4	"	"	As	As
✓ 1579	1	2 1/2	1/2	"	"	1 1/4	"	"	As	As
✓ 1580	12	2 1/2	1 1/2	"	"	45	"	"	As	As
✓ 1581	1	1	1	"	"	1	"	"	As	As
✓ 1582	8	2 1/2	2	"	"	40	"	"	As	As
✓ 1583	14	3	3	"	"	126	"	"	As	As

Rock blasting

As

✓ 1584	5	3 1/2	2	"	"	49	"	"	As	As
✓ 1585	12	2	1 1/2	"	"	36	"	"	As	As
✓ 1586	12	2	1	"	"	24	"	"	As	As
✓ 1587	6	3	2	"	"	36	"	"	As	As
✓ 1588	4	3 1/2	2 1/2	"	"	35	"	"	As	As
✓ 1589	16	2 1/2	1 1/2	"	"	60	"	"	As	As
✓ 1590	16	3	1/2	"	"	24	"	"	As	As

Quarrying loose Rock

Rock blasting

Quarrying loose Rock

Rock blasting

Loose Rock

Rock blasting

Loose Rock

Rock blasting

Quarrying loose Rock

Rock blasting

Rock blasting

Quarrying loose Rock

Rock blasting

As

Rock blasting

Spaniardsville

9849 3 6347 777 5 4162 754 374 5888

332

Brought forward

9483 1/2 6120 6965 2994 1/2 14989 1/2 6866 1/2

Light & Heavy Work

3 1/4	4 3/2	3	"	"	1/2	"	"	"	"
3 1/2	3 3/2	2	"	"	"	"	21 1/2	"	"
6 3/2	1 1/2	"	"	"	3 1/2	"	"	"	"
4 3/2	1 1/4	1 1/2	"	"	"	"	3	"	"
2 1/2	1 1/2	3/4	"	"	"	"	"	"	"
12 2 1/2	1 3/4	5 2 1/2	"	"	"	"	"	"	"
5 1/2	3 1 3/4	"	"	"	28 1/8	"	"	"	"

Rocky soil
Rock blasting
Rocky soil
South trending
Rock blasting

South trending
Rocky soil
Rock blasting

5 1/2	3 1/2	1 3/4	"	"	33 1/2	"	"	"	"
8 3	1 3/4	"	"	"	142	"	"	"	"
3 2 1/2	1 1/2	"	"	"	11 1/4	"	"	"	"

Quarrying loose Rock
Rock blasting

9	3	1 1/2	"	"	31 1/2	"	"	"	"
7	3	3/4	"	"	15 3/4	"	"	"	"
5 2 1/2	2	"	"	25	"	"	"	"	"
21 2 1/2	1 1/2	"	"	78 3/4	"	"	"	"	"
26 2 1/2	1 1/2	"	"	97 1/2	"	"	"	"	"

Quarrying Rocky soil
Rock blasting
Rocky soil
Quarrying loose Rock

4	3	1 1/2	"	"	18	"	"	"	"
12 2 1/2	1 1/2	"	"	45	"	"	"	"	"
4 1 1/2	1	"	"	6	"	"	"	"	"
8 3	1 1/2	"	"	26	"	"	"	"	"

Rock blasting
Quarrying loose Rock
Rock blasting

8 2 1/2	2	"	"	40	"	"	"	"	"
7 1/2	1 1/2	1	"	11 1/4	"	"	"	"	"
4 1 1/2	1	"	"	6	"	"	"	"	"

Quarrying loose Rock
Rock blasting

8 2 1/2	1 3/4	"	"	21 1/2	"	"	"	"	"
8 2 1/2	2 1/2	"	"	40	"	"	"	"	"
8 2 1/2	1 1/2	"	"	38	"	"	"	"	"
12 3	1	"	"	36	"	"	"	"	"
112 3	1 1/2	"	"	574	"	"	"	"	"

Quarrying loose Rock
Rock blasting

24 3	1 1/2	"	"	108	"	"	"	"	"
24 3 1/3	24	"	"	"	"	"	"	"	"
24 3/4	3/4	"	"	13 1/2	"	"	"	"	"
9 3	2	"	"	42	"	"	"	"	"

Quarrying loose Rock
Rock blasting
Quarrying loose Rock
Rock blasting

Carroll Green

9577 1/2 6218 7245 2992 537 1/2 5680

See Rock for content

2

Don't forward

6120 68123 233094 22724 16942

Rafid Range Black

3 1572

8	1/4	4	"	"	"	"	"	10	"
8	1 1/2	1	"	"	"	"	12	"	"
8	1	2 1/2	"	"	"	"	20	"	"
8	2	3	48	"	"	"	"	"	"

Reichman
Explosion Loose Rock
Shut Rock
Rattle filling
Shut Rock Blasting

Reichman

80

1612

4	3 1/2	3 1/2	"	"	"	"	49	"	"
16	3/4	3/4	"	"	"	"	"	"	"
20	3 1/2	3 1/2	"	"	"	"	245	"	"
20	3/4	3/4	"	"	"	"	"	"	"
8	3 1/2	2 1/2	"	"	"	"	70	"	"
8	3/4	3/4	"	"	"	"	4 1/2	"	"

Paraphet
Rock Blasting
Paraphet
Rock Blasting
Paraphet
Rock Blasting

Rafid

187

6512

6	3 1/2	2	"	"	"	"	42	"	"
12	3 1/2	1 1/2	63	"	"	"	"	"	"
28	3 1/2	2	"	"	"	"	196	"	"
28	3/4	3/4	"	"	"	"	"	"	"
62	3 1/2	3	"	"	"	"	651	"	"
62	3/4	3/4	"	"	"	"	"	"	"
62	3	1/3	62	"	"	"	"	"	"
16	3 1/2	2	"	"	"	"	112	"	"

Reichman
Shut Rock for Cement
Rattle weathening
Rock Blasting
Paraphet
Rock Blasting
Paraphet
Rock Blasting
Paraphet
Rock Blasting

Rafid + Range

80

7012

6	3 1/2	2	"	"	"	"	42	"	"
12	3 1/2	1 1/2	63	"	"	"	"	"	"
28	3 1/2	2	"	"	"	"	196	"	"
28	3/4	3/4	"	"	"	"	"	"	"
62	3 1/2	3	"	"	"	"	651	"	"
62	3/4	3/4	"	"	"	"	"	"	"
62	3	1/3	62	"	"	"	"	"	"
16	3 1/2	2	"	"	"	"	112	"	"

Paraphet
Rattle filling
Rocky soil
Rock Blasting
Loose Rock
Rock Blasting
Rock 80
Paraphet
Rattle filling
Rattle filling
Loose Rock
Rock Blasting

Rafid

80

1572

16	3/4	3/4	"	"	"	"	"	"	"
16	3	1/3	16	"	"	"	"	"	"
12	3 1/2	2 1/2	"	"	"	"	105	"	"
3	2	1	"	"	"	"	61	"	"
14	3 1/2	2 1/4	"	"	"	"	100 1/2	"	"
14	3 1/2	1	"	"	"	"	14	"	"
29	2 1/2	3	"	"	"	"	27 1/2	"	"
29	3/4	3/4	"	"	"	"	"	"	"
29	3	1/3	29	"	"	"	"	"	"
8	3	2	"	"	"	"	48	"	"
4	3	3	"	"	"	"	36	"	"
29 1/2	3	2 1/2	"	"	"	"	"	"	"
15	3 1/2	4	"	"	"	"	210	"	"
15	3	1/3	15	"	"	"	"	"	"
18	1 1/4	4	"	"	"	"	90	"	"
18	1 1/2	1	"	"	"	"	27	"	"
18	2	3	108	"	"	"	"	"	"
18	3/4	3/4	"	"	"	"	6 3/4	"	"

Paraphet
Rattle filling
Rattle filling
Loose Rock
Rock Blasting
Paraphet
Rattle filling
Rattle filling
Loose Rock
Rock Blasting
Paraphet
Rattle filling
Rattle filling
Loose Rock
Rock Blasting

Don't forward

6120 68123 233094 22724 16942

Ref'd	Angle	Wd.	3	3 1/2	1	28	"	"	"	"
3/3	Brought Over		1939 2	57002	62462	19034	10702	4407		

South Works ordering

Book

widening ground.

Back

Enduring Rocky soil

Grace

22

Rock blasting

Rocky rail

Shall-Post-Cladding

2

2

70

Reading - Grace
Book - 11/1/10

Book Binding

11

Grace

Love Rock

Rechnung:

S. M. Smith

the foundation - Jack.

Backsliding.

Enlightenment

22.

250

22

Harley Road

understanding health.

Deutschmann

Formulation South

Particulars

Selling South

11

Book Binding

Recherché

South Foundation

Do nothing

Black Blending

1880-1881

Health Insurance

28

1880

100

Brought Over
6925257002 64182 18393/4 98753/4 86983/4

Ex: foundation - Southworth

Rockledge

Reedman &

South Hilling

Shal. Rock. Do

Paradise Cove Park

Reuschenthal.

Paternal

Verdun

10

175

1

6.

10

10

2

10

1

1

1

1

1

—

10

1

1

1

Rechnung

Patented

Reverend

Basel

Wade Martin

Wm. L. Garrison

Letter

10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479
480
481
482
483
484
485
486
487
488
489
490
491
492
493
494
495
496
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521
522
523
524
525
526
527
528
529
530
531
532
533
534
535
536
537
538
539
540
541
542
543
544
545
546
547
548
549
550
551
552
553
554
555
556
557
558
559
560
561
562
563
564
565
566
567
568
569
570
571
572
573
574
575
576
577
578
579
580
581
582
583
584
585
586
587
588
589
590
591
592
593
594
595
596
597
598
599
600
601
602
603
604
605
606
607
608
609
610
611
612
613
614
615
616
617
618
619
620
621
622
623
624
625
626
627
628
629
630
631
632
633
634
635
636
637
638
639
640
641
642
643
644
645
646
647
648
649
650
651
652
653
654
655
656
657
658
659
660
661
662
663
664
665
666
667
668
669
670
671
672
673
674
675
676
677
678
679
680
681
682
683
684
685
686
687
688
689
690
691
692
693
694
695
696
697
698
699
700
701
702
703
704
705
706
707
708
709
710
711
712
713
714
715
716
717
718
719
720
721
722
723
724
725
726
727
728
729
730
731
732
733
734
735
736
737
738
739
740
741
742
743
744
745
746
747
748
749
750
751
752
753
754
755
756
757
758
759
760
761
762
763
764
765
766
767
768
769
770
771
772
773
774
775
776
777
778
779
780
781
782
783
784
785
786
787
788
789
790
791
792
793
794
795
796
797
798
799
800
801
802
803
804
805
806
807
808
809
810
811
812
813
814
815
816
817
818
819
820
821
822
823
824
825
826
827
828
829
830
831
832
833
834
835
836
837
838
839
840
841
842
843
844
845
846

incubation - twelve

100

Laurel River — 733975 5780262462 19.83°/4.67502 44967

733976 57802-6-24621983 1/4 167502 44587

62

Brought Over 50346 57502 57544 16755 74439 50603

2 539	12	2	3	"	"	"	72	"	"	Rock blasting low and then Rocky soil
24	3	1/4	"	"	90	"	"	"	"	
Black & Rough	Black	5039	76	2 1/2	1/4	237 1/2	"	"	"	Southwestern
	Red	5035	16	4	4 1/2	258	"	"	"	Do Do
		5041	16	3	3	"	"	"	"	Shut Rock blasting
Do	Do	5047	8	6	4	"	"	"	"	Do
Produce	Black	5047	8	3	3	"	"	"	"	Do
		5047	6	4	2	"	48	"	"	See note for current - 1808
		5047	40	3	6	"	"	720	"	Shut Rock blasting
		5047	10	1	1 1/2	"	"	"	15	Reinforcement
		5047	82	3/4	3/4	"	"	"	46 3/4	Parapet
		5047	8	2 1/2	3	"	"	"	60	Rock blasting @ 12 Return
Do	Do	5047	72	3/4	3/4	"	"	"	40 1/2	Parapet
		5047	6	4	4	"	"	96	"	Rock blasting for culvert
Asic Rough	Red	5047	8	3	4	"	"	96	"	Swamping low Rock
		5047	16	3	2 1/2	"	"	"	120	Rock blasting
		5047	12	2	2	"	48	"	"	Rocky soil
		5047	12	1	1	"	"	2	"	Rock blasting

Slip Rough	Black	32	2 1/2	1 1/2	120	"	"	"	"	Rock weathering
		1	1	1	"	"	"	1	"	Rock
		44	2	1	88	"	"	"	"	Castle tower
		2	2	1	"	"	"	4	"	Rock
		56	2	1	112	"	"	"	"	South work weathering
		16	3	1	48	"	"	"	"	Do
		12	3	2	"	"	"	72	"	Rock blasting
		12	3	1 1/2	"	"	"	36	"	Rock blasting
		13	4	2 1/2	"	"	"	130	"	Rock blasting
		12	1	1	"	"	"	2	"	Rock blasting
		12	3	2	"	"	"	"	"	Rocky soil
		46	2 1/2	1 1/2	"	"	360	"	"	Do
		8	3	2 1/2	"	"	60	"	"	Do
		12	3	3	"	"	108	"	"	Swamping low Rock
		8	1 1/4	2 1/2	"	"	"	25	"	Reinforcement
		8	1 1/2	3/4	9	"	"	"	"	See foundation South work

296
St. & Strong's

2 37108 strength 6 Quers 14629 6 6593 2 4 29 1509 6 5380 29 29 29

Rocky soil

Rocky soil

Do Do

Do Do

Rocky soil

Rocky soil

Rocky soil

Rocky soil 10" Plateau
Foundation line Rock
Parapet

Rocky soil
Rocky soil
Rocky soil

Rocky soil

Do

Rocky soil

Rock

Rocky soil

Withering with 211" Plateau
Rocky soil

Parapet

Rock

Gravel cutting

Rock

Southwards

Rock

Southwards

Gravel cutting 60396 6750 4553 1575 1449 306 6790

Do Do

Do Do
Do Do
Do Do

Do Do
10 6 11 1/2
Plateau

Do Do

Do Do

8	2 1/2	2	"	"	"	140	"	"	"
20	2 1/2	1 1/2	"	"	"	75	"	"	"
20	2 1/2	1 1/2	"	"	"	75	"	"	"
58	2	1	"	"	"	112	"	"	"
16	2	1	"	"	"	32	"	"	"
10	3	1 1/2	"	"	"	45	"	"	"
20	4	2	"	"	"	160	"	"	"
20	3	1 1/2	"	"	"	90	"	"	"
14	2	1	"	"	"	8	"	"	"
2	1	1	"	"	"	2	"	"	"
6	3/4	3/4	"	"	"	3 3/8	"	"	"
1 1/2	1 1/2	1	"	"	"	2 1/4	"	"	"
12	2	1 1/2	"	"	"	36	"	"	"
4	3	1 1/2	"	"	"	18	"	"	"
16	2 1/2	1 1/2	"	"	"	60	"	"	"
1	1	1	"	"	"	1	"	"	"
104	2 1/2	1	"	"	"	260	"	"	"

53
Napa Range No.

5' 6 9/16"
Return

14413 brought down 4256 5046 2770 1425 4777 3364

20	4	1 1/2	"	"	120	"	"	"	"
20	4	1	"	"	"	80	"	"	"
8	4	3	"	"	"	96	"	"	"
10. Widen and fast									
32	1 1/4	4	"	"	"	160	"	"	"
32	1	1/2	"	"	"	16	"	"	"
20	2	2	"	"	"	80	"	"	"
44	3 1/4	3 1/4	"	"	"	21 3/4	"	"	"

Rocky soil
Rock, blasting
8" 8" Return

Reinforcement
Rock for foundation
Rock
Rampart

Rocky soil
Earth work

Rock blasting
Rocky soil

Rocky soil

80 80

High & Range Start

8	4	2 1/2	"	"	80	"	"	"	"
40	2	2	160	"	"	"	"	"	"
2	2	1	"	"	"	4	"	"	"
44	2	1 1/2	"	"	132	"	"	"	"
32	3	3 1/2	"	"	336	"	"	"	"

Napa Red

16	3	4	"	192	"	"	"	"	"
8	3	1 1/2	"	36	"	"	"	"	"
4	3	1	"	"	12	"	"	"	"
20	2	1 1/2	"	60	"	"	"	"	"
4	3	1 1/2	"	"	18	"	"	"	"
20	2	2	"	80	"	"	"	"	"
2	1	1	"	"	2	"	"	"	"
11	2	1 1/2	"	48	"	"	"	"	"

Gravel
80
Rock blasting
Rocky soil

Rock
Rocky soil

Rock blasting
Rocky soil
Rock blasting
Rocky soil

80 80

4	3	3	"	126	"	"	"	"	"
4	4	3	"	"	48	"	"	"	"
8	3	3	"	72	"	"	"	"	"
4	2	2	"	"	16	"	"	"	"
3	3	4	"	"	36	"	"	"	"
6	2	1	"	"	12	"	"	"	"
6	3	3	"	"	54	"	"	"	"
11	2 1/2	1	"	27 1/2	"	"	"	"	"

Rock blasting
Rocky soil
Rock blasting
Rocky soil

Gravel - 4365 5576 2975 1425 5269 3505

1 1893 Brought Over 39238 43902 2260 1435 4697 20082

Refined Range Rd 1 1/2 5 1/2

24	1 1/4	4	.	.	.	.	120
24	1 1/2	1	36	"	"	"	"
24	2	3	144	"	"	"	"
33	3/4	3/4	"	"	"	"	18 1/3

5 Wildcard

Rock blasting

12	2	2	.	.	.	.	48
24	1 1/4	3	.	.	.	.	90
24	1 1/2	1	36	"	"	"	"
24	3/4	3/4	"	"	"	"	13 1/2

Barrel

8	2 1/2	2	.	.	.	.	40
8	3	1	.	.	.	.	24
16	3	1	48	"	"	"	"

Rock blasting

24	3	2	.	.	.	.	144
8	3	2	"	"	"	"	48

Barrel

6	3	1	.	.	.	.	18
8	3	1 1/2	"	"	"	"	36

Rock blasting

32	3	4	.	.	.	.	384
16	2	4 1/2	"	"	"	"	144
12	1 1/4	4	"	"	"	"	60
12	1 1/2	1	18	"	"	"	"

Barrel

8	3	3 1/2	.	.	.	.	84
11	3	2 1/2	"	"	"	"	120

Barrel

2	3	1	.	.	.	.	6
24	3	1 1/2	"	"	"	"	120

Rock blasting

16	3	2 1/2	.	.	.	.	120
44	3	1 1/2	.	.	.	.	198
13	4	2 1/2	"	"	"	"	130

Barrel

44	3	1 1/2	.	.	.	.	198
13	4	2 1/2	"	"	"	"	130

Rock blasting

44	3	1 1/2	.	.	.	.	198
13	4	2 1/2	"	"	"	"	130

44	3	1 1/2	.	.	.	.	198
13	4	2 1/2	"	"	"	"	130

44	3	1 1/2	.	.	.	.	198
13	4	2 1/2	"	"	"	"	130

63a

Beulah T. Hapner Betty

33 South Street. 1867 7/2 1868 4/20 1868 7/68 1869 10/3/4

Back bleeding

Paraph.

Don't Widening

Backslating

Broad cutting.

Quarrying for Rock

Rock Landing @ 3rd Pelicans.

Deutchman

Beethoven.

Product

Grant

22.

10

28

58

83 1/2

36

Book Binding

Ernest Cuthing

Leaving home Book

Reedman.

Increasing Foundation - 2011

Reedman

Ex. Foundation - Lower Rock

Northbrook, Ill. May 1891

Barakat

Dear my dear son Jack.

Backslapping

Rocky Mts. P. H. Williams

Reichmann

Dr. Jundtson - Love Rock

Wm. H. H. H.

Actuals. 2160 216 570 1136 2203 985 1/2

Details - Estimate No. 4. 29/10/45

Quantity
of
surface.

South Slope
and Small

and shall

North St,

10

100

189

Small

Salicaria 1296 866 420 180 48% 40

Comptroller District
 William L. Lacey

estimate for widening
 of roadway bridge from
 12 feet from the
 center to the foot
 of roadway bridge

Refers 68000

W. L. Lacey
 9/17/1969
 9/17/1969

C. No. 1769

670

There are also other 5 items here - all
 made for the 5 items of the 2 bridges referred
 to by Gen. Wallace / see the estimate on 9/28
 when we 153 15th March 1969 / but the amount
 is not included, it is probably 22,544 by
 27.3.75. Also send a memorandum.

W. L.

With regards 22.8.75

C. 120769

There would appear to have been
a call made for the Plans of the
(C.E. 120769) 2 Bridges referred to by Col. Walker
(see his remark on Superintending
Engineer's letter No. 155, 15th March 1875)
but the memo is not endorsed, it is
probably No. 344 of 27th March 1875.
If so send a reminder.

(Sig^d) J.G.H.

22.5.75.

Please send copy of
memo: quoted which is not there.
No call is made in this memo.

perhaps a call was made in regard
to the paper. Mean while.

22.5.75
27th March 1875

No 344 Memo.
Adverting to the letter from the
Supy. Engr. General dated 15th
March 1875 submitting a survey
and estimate for widening the Ponachy
Saddle to the foot of the American
Kills, the Chief Engr. has the honor to
request that plans and estimates of the
bridges and drains may be furnished.
27th March 1875 Signed E. S. S. S. S.
Ch. Engr. G. S. S.

The Supy. Engr. General.

Remains, 27th July 1875

Public Works Dept.

Memorandum

Papers on the subject of widening
the Ponachy Bridle path.

Resubmitted to the
Honble the Governor with reference
to remark against para 4 of
the draft. The note there
mentioned has not been received

John Astub, Major R.E.

Potacamund
9th July 1875

Offg. Secy. to Govt.
P.W. Dept.

620
7/6/75

75a
NEW WORKS

COIMBATORE DISTRICT.
No. I Coimbatore Range..

Detailed Estimate No. 16 of 1875-76

Work Constructing a Tunnel of 2 miles of 6 feet on the
Dormachy Grant.

Particulars of work.	Number.	MEASUREMENT. in feet			Contents.
		Length.	Breadth.	Depth.	
Carte Work					
Excavation of Tunnel	2	8½	4	3	178½
Substructure		8½	1	1	13½
Pier		8½	1	1	8½
Retaining wall		8	1	1	8
Total Cords					206½
Foundation					
Retaining wall	2	8	1	1	8
Substructure		8½	1	1	13½
Pier		8½	1	1	8½
Superstructure					
Rough Stone paving	2	5½	2	⅓	7⅓
	43	4½	1	⅓	1½
		6	1½	⅓	3
Retaining wall	2	1	1	2⅓	5⅓
Substructure	2	8½	1	2	26½
Pier		8	1	2	12
Parapet	2	7	¾	¾	7⅞
Total Cords					90¼
Covering Stone					
Covering Stone		6	6	¼	9
Total Cords					9
Lombard Range office 5 th June 1875					

Coimbatore Range
Office 5th June 1875

Range Office

14 11.
96. 17 1/2
1875

206	Cyds of Earth Work—	@	2	Cyds	25 12	✓
72	Cyds of Dry Stone masonry—	@	12	"	47 8	"
9	Cyds of covering Stone—	@	102	"	91 2	✓
					1826	"
Gravels &c					15 10	"
<u>Total Estimate Superficial</u>					200	"
Add for 9 Cubits					1300	"

Attest
Camp Officer

* The amount received of \$100.00

COIMBATORE DISTRICT.

No. I Coimbatore Range..

Detailed Estimate No. 16. of 1875-76

Work Constructing a Tunnel of 1 vent of 3 feet on the
Coimbatore Shant.

Particulars of work.	Number.	MEASUREMENT. in yards			Contents.
		Length.	Breadth.	Depth.	
<i>Excavation for Tunnel</i>		$7\frac{1}{2}$	$2\frac{1}{2}$	2	$37\frac{1}{2}$
<i>Do Abutments</i>	2	$6\frac{1}{2}$	$\frac{2}{3}$	$\frac{1}{2}$	$4\frac{1}{3}$
<i>Do Retaining walls</i>		$3\frac{1}{2}$	1	1	$3\frac{1}{2}$
<i>Total Cords</i>					$45\frac{1}{3}$
<i>Foundations</i>					
<i>Retaining wall</i>		$3\frac{1}{2}$	1	1	$3\frac{1}{2}$
<i>Abutments</i>	2	$6\frac{1}{2}$	$\frac{2}{3}$	$\frac{1}{2}$	$4\frac{1}{3}$
<i>Superstructures</i>					
<i>Single Stone framing</i>		6	1	$\frac{1}{3}$	2
<i>Retaining wall</i>	2	1	$\frac{2}{3}$	$\frac{1}{3}$	$1\frac{1}{3}$
<i>Abutments</i>	2	$6\frac{1}{2}$	$\frac{2}{3}$	1	$8\frac{2}{3}$
<i>Parapets</i>	2	3	$\frac{3}{4}$	$\frac{3}{4}$	$3\frac{3}{8}$
<i>Total Cords</i>					$25\frac{1}{3} 23\frac{7}{8}$
<i>Covering Stone</i>					
<i>Covering Stone</i>		6	$1\frac{2}{3}$	$\frac{1}{4}$	$2\frac{1}{2}$
<i>Total Cords</i>					$2\frac{1}{2}$

Coimbatore Range
Office 10 June 1875

W. H. H. H.

COIMBATORE DISTRICT.

No. I Coimbatore Range.
In a letter from the
Supy. Coimbatore Comba.
to the Chief
Engineer. 20th May
of 1875.

Work Constructing a Tunnel

of 3 feet of 1 vent on the
Coimbatore Shant.

1875-76

Repece 1875

ABSTRACT.

Quantity.	Description of work.	Rate.	Per.	AMOUNT OF EACH.		Remarks.
				Article.	Work.	
	Work done by a Tunnel of 10 in.					
	73 feet in the Permeable Channel.					
45	Cyds of Earth Work—	2.00		510.00		
2377	Cyds of Dry Stone Work—	12.00		1779.60		
2 1/2	Cyds of Covering Stone—	102.00		255.00		
					486.90	
	Sum of 4.00				1.90	
	Sub Total				50.00	
	Total for 107 feet				5350.00	

Combatu Range
Office 5th June 1903

W. H. Wilson, Colonel
Superintending Engineer
Combatu

R. H. Day, Jr.
Range Officer

* The amount of work done is 107 feet
" 5 1/2 inches

COIMBATORE DISTRICT.

No. I Coimbatore Range.

Detailed Estimate No. 16 of 1875, Span of 25 feet.

Work - Constructing a Bridge across the stream on the 5th mile
169 yds on the Ponnachy Ghaut.

Particulars of work.	Number.	MEASUREMENT in feet & inches			Contents.
		Length.	Breadth.	Depth.	
Foundation. Rough to stone in channel.					
Abutments.	17	9	3		459
Wings.	7 1/2	5 1/2	3		123 3/4
Superstructure:					
Abutments.	17	6	17 3/4		1810 1/2
	17	3 3/4	13 3/4		876 2/5
Wings.	2	15	3 3/4	10 3/4	1207 3/8
	2	6 1/2	4 1/2	3	165 3/4
	2	4 1/2	3 1/2	4	449
	2	14 1/2	2 3/4	5 3/4	458 9/10
Leaps to cutwaters.	3	2	2		6
	3	1 1/2	2		4 1/2
Parapets.	2	23	1 1/2	3	207 1/2
	2	20	1 1/2	3	180
Deduct for space occupied by beams & string course					5620
					126
Total cubic yards.					5694
Lakewood wrought & put up.	6	31	13	3/4	186 1/4
Beams.					186 1/4
Lakewood wrought & put up.					
Junglewood wrought & put up.					
Planing	31	13	1/4		100 3/4
Joists	14	13	1/4	3/8	47 1/8
	5	19	1/4	3/8	8 29/32
Carried over					

1769-4002

COIMBATORE DISTRICT.

No. I Coimbatore Range.

In a letter from the
Sd/- Engineer Coimbatore
to the Sd/- Chief
Engineer, 23rd May 1875
of 14 June 1875
to Mr. C. D. A. Esq.

Work - Constructing a

Span of 1 ft. of
3 feet on the Ponnachy
Ghaut.

1769-4002

Reported by Sd/-

ABSTRACT.

Brought Over					
Top & bottom rails	4	50	5	$\frac{1}{4}$	10
Diagonals	16	8	$\frac{1}{4}$	$\frac{1}{8}$	5 $\frac{3}{8}$
Uprights	10	3 $\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{4}$	2 $\frac{3}{10}$
Cross struts	10	5	$\frac{1}{8}$	$\frac{1}{4}$	4 $\frac{1}{8}$
Total left of Junglwood wrought & put up cutstone work.					136 $\frac{7}{32}$
Stringing course to parapets.	2	23	$1\frac{1}{4}$	$\frac{1}{2}$	28 $\frac{3}{4}$
	2	20	$1\frac{1}{4}$	$\frac{1}{2}$	25
	2	23	$1\frac{1}{2}$	$\frac{1}{4}$	17 $\frac{1}{4}$
	2	20	$1\frac{1}{2}$	$\frac{1}{4}$	15
D. cutwaters	4	4	$1\frac{1}{4}$	$\frac{1}{2}$	10
					96.01
Total legs of cutstone work					3 $\frac{1}{2}$
Earthwork.					
Wings	2	15	6	3	540
	2	14	4 $\frac{1}{2}$	3	378
Approaches.		75	20	6	9000
					99.18
Total legs of earthwork					367
Scaffolding					

Coinbatore
5th June 1875

[Signature]
Range Officer

Quantity.	Description of work.	Rate.	Per.	AMOUNT OF EACH.		Remarks.
				Article.	Work.	
	Work					
	Constructing a bridge across the stream on the 5 th mile up the Poonachy Ghaut					
230 $\frac{1}{2}$						
200						
186	Cyds of rough stone in Chumaw 3					Exp. 110
	left of cutstone wrought & put up @ 2 8.					Exp. 465
136 $\frac{7}{32}$	left of Junglwood wrought & put up including nailing & tarring @ 2					Exp. 272
3 $\frac{1}{2}$	legs of cutstone work 15					Exp. 52 8.
367	D. of earthwork hard 6					Exp. 137 10
	Scaffolding					60
						2297 10
	Sundries including Baling water etc.					172 6
	Total Estimate Paper					4770

Coinbatore
5th June 1875

[Signature]
Range Officer

W. Wilson Colver Esq.
Superintending Engineer
Coinbatore

COIMBATORE DISTRICT.

No. I Coimbatore Range..

Detailed Estimate No. 16 of 1875-76

Work *Constructing a Tunnel of 1 mile of 1 foot on the*
Ponnachy Shant.

Particulars of work.	Number.	MEASUREMENT.			Contents.
		Length.	Breadth.	Depth.	
<i>Earth Work</i>					
<i>Excavation for Tunnel</i>		$8\frac{1}{2}$	4	3	102
<i>Abutments</i>	2	$8\frac{1}{3}$	1	1	13 $\frac{1}{3}$
<i>Retaining wall</i>		$4\frac{1}{2}$	1	1	4 $\frac{1}{2}$
					119 $\frac{1}{2}$
					120
<i>Total Cys.</i>					
<i>Foundation</i>					
<i>Retaining wall</i>		$4\frac{1}{2}$	1	1	4 $\frac{1}{2}$
<i>Abutments</i>	2	$8\frac{1}{3}$	1	1	13 $\frac{1}{3}$
<i>Superstructure</i>					
<i>Angle steel framing</i>		$5\frac{1}{2}$	2	$\frac{1}{2}$	3 $\frac{1}{2}$
		$2\frac{1}{2}$	1	$\frac{1}{2}$	2 $\frac{1}{2}$
		3	1	$\frac{1}{2}$	1
<i>Retaining wall</i>	2	1	1	$2\frac{1}{2}$	5 $\frac{1}{2}$
<i>Abutments</i>	2	$8\frac{1}{2}$	1	2	21
<i>Parapets</i>	2	4	$\frac{3}{4}$	$\frac{3}{4}$	2 $\frac{1}{2}$
					59 $\frac{1}{2}$
<i>Total Cys.</i>					
<i>Covering Slabs</i>					
<i>Covering Slabs</i>		8	3	$\frac{1}{2}$	4 $\frac{1}{2}$
					4 $\frac{1}{2}$
<i>Total Cys.</i>					

Coimbatore Range
Office 5th June 1875

Checked P.H.

P.H. Harris
Range Officer

COIMBATORE DISTRICT.

No. I Coimbatore Range.

For a better from the
Super. Coimbatore Com.
before to the Officer
Coimbatore D. 21/11/75
of 14 June 1875

No

Work *Constructing a*

bridge across the stream
on the 5th mile 1875
on the Ponnachy Shant.

Rupers..... 1190

11/11/75
8/7/75

620
7/16/75

NEW WORKS

COIMBATORE DISTRICT.

No. I Coimbatore Range.

Detailed Estimate No. 16 of 1875 of 25 feet each

Work: *Building a similar bridge across Chinna stream in the Ponnachy Shant.*

Particulars of work.	Number.	MEASUREMENT.			Contents.
		Length.	Breadth.	Depth.	
Foundation		20	7	7	980
Foundation to abutments & piers	2	20	7	2	280
Superstructure		20	7	1	280
Abutments		17	6	17 1/2	1759 1/2
		17	6	12 3/4	1249 1/2
		13	6	17 3/4	1540 1/2
Piers		13	6	17 3/4	1384 1/2
	2	1 1/2	5 1/2	3 1/2	148 1/2
West wings	2	27 3/4	4 3/4	3	247
	2	13	3 1/2	10 3/4	978 1/4
East wings	2	13	3 1/2	10 3/4	1160 1/4
		6	6	17 1/2	630
Cutwaters above		6	6	15 1/2	558
Capo to cutwaters	3	6	2	3	81
Parapets	1	22	1 1/2	8	396
					13446 1/2
Deduct for space occupied by beams & string course					266 1/2
Netal Cts					13179 1/2
Cutwater wall		88	1 1/2	1 1/2	55
String course to parapets		88	1 1/2	1 1/4	16
Do to cutwaters		60	1 1/2	3/4	37 1/2
					125 1/2
Netal Cts					13304 1/2

COIMBATORE DISTRICT.

No. I Coimbatore Range.

In a letter from Mr. Supt. Engineer Combr. dated 11th June 1875

No

Work: *Construction of a bridge across Chinna stream in the Ponnachy Shant.*

1875-76

Rupers...

Half wood wrought-
up

Brams

18 31 3/4 1/3 558

Total Cyl

558

Junglewood wrought-
up

Plumbing

93 13 1/4 312 1/4

Joists

9 13 1/4 3/2 14 3/8

Top and bottom rails

12 19 1/4 3/2 21 3/8

Diagonals

36 9 1/4 1/2 50

Uprights

8 7 1/4 1/2 13 1/2

Large Shirts

24 3 1/2 1/4 1/4 2 1/3

24 5 1/2 1/4 1/4 5 1/4

Total Cyl

400

Earth Work

Piers and abutments

20 1 1/2 1 1/2 450

Wings

20 1 1/2 2 250

Approaches

2 50 1 1/2 5 1620

4 13 1/2 1 1/2 8000

Total Cyl

11160

Scaffolding

Coimbatore
June 1875

Range Officer

ABSTRACT.

Quantity	Description of work.	Rate.	Per.	AMOUNT OF EACH.		Remarks.
				Article.	Work.	
	Work done: a Timber Bridge across Chinnar stream on the Perambur Grant.					
475	Cyl. of Anglo Shirs in Chinnar	3		Cyl. 1425		
6	Cyl. of bullocks work	15			90	
558	Cyl. of half wood wrought- up	28		Cyl. 1595		
400	Cyl. of junglewood wrought- up with	2			800	
	Spile & Lining					
400	Cyl. of Earth work	6		Cyl. 2400		
	Scaffolding				150	
	Boiling water				100	
						Large
						165
						103
						1600

Indrao & Co.
Total Estimate Rs 2600

Coimbatore Range
Office Coimbatore
June 1875

Range Officer

Superintending Engineer
Coimbatore

Estimate No 13 of 1874-75.

Estimate for widening the Poonaichy bridge to 12 feet from the Poonaichy Saddle to the foot of Anumalay Hill in No 1 Coimbatore Range Coimbatore District.
Distance of the Road - 6 miles - 2 furlongs and 48 yards.

Contents	Particulars	Rate	Per	Amount	Total	Remains
2382 3/4	Cub. Yds of Earthwork cutting	2	Cut	2980	7 1/2	
	widening & filling the road	3	"	1344	12 "	
71 7/2	" of gravel work	4	"	2150	2 1/2	
8600 7/2	" of rocky soil	5	"	2308	7 1/2	
738 7/4	" of quarrying loose rock	18	"	32634	6 6	
22422 7/2	" of blasting rock	12	"	5025	3 9	
6700 7/2	" of revetment			47443	7 10	
				2406	8 2	
	Sundries &c			Total Rupees	49850	"

Next - Society's Timber Bridge across Chinnaray Stream on the Poonaichy Chant.

425	Cyds of Rough Stone in Chinnaray	3	"	Cyds	1275	"
4 7/3	" of cut stone work	15	"	"	70	"
558	Cft of Teakwood wrought and put up	28	"	Cft	1395	"
395	" of Jangle wood wrought and put up with nails and tarring	2	"	"	790	"
413 7/2	Cyds of Earth work hard scaffolding	6	"	Cyds	155	"
	Baling water				150	"
					100	"
					3935	"
	Sundries &c				465	"
	Total Rupees				4400	"

Next - Society's bridge across the stream on the Poonaichy Chant 5 miles 169 yds from foot.

Carried forward 54250 "

COIMBATORE DISTRICT.

No 1 Coimbatore Range.

Sanatkar & Co. Civil Engineers & Architects
No 10, Cross Street, Coimbatore.

No 16

Work Constructed by

Sanatkar & Co. Civil Engineers & Architects

of 8 spans of 25 feet each across the Chinnaray stream on the Poonaichy Chant.

Rupees 4000

1874-75

20-17 July 1875

Contents
Remarks

Particulars	Rate	per	Amount	Total
236 1/2 Cys of rough stone in chains	Brought over		54250	" "
186 Cft of Oakwood wrought and put up	3 " " Cysd	710	" "	
136 1/2 " of jungle wood wrought and put up including hauling and laming	2 " " " "	465	" "	
372 Cys of cut stone work	15 " " Cysd	52.8	" "	
267 " of earthwork heard scaffolding	" 6 " " "	137.10	" "	
		60	" "	
Sundries including bulging brats		1697.9	" "	
		172	" "	
Total Rupees			1870	" "

Part 12. Cost of 9 Tunnels
of 2 vents of 6 feet on the
Poonachy Chant.

256 Cys of Earthwork	" 2 " Cysd	25.12	" "
93 " of Dry stone work	" 12 " " "	69.12	" "
9 " of Curving stones	10 2 " " "	91.2	" "
		186.10	" "
Sundries &c		15.6	" "
Total for one Tunnel		200	" "
Total for 9 Tunnels		1800	" "

The Cont.
 sanctioned
 as per this
 Order is
 Rs. 900 at
 100 Rs. each

Part 13. Cost of 43 Tunnels
of 2 vents of 6 feet on the
Poonachy Chant.

120 Cys of Earthwork	" 2 " Cysd	15	" "
57 1/2 " of Dry stone work	" 12 " " "	24.6	" "
17 1/2 " of Curving stones	10 2 " " "	165.9	" "
		101.15	" "
Sundries &c		5.1	" "
Total for one Tunnel		110	" "
Total for 43 Tunnels		4730	" "
Brought forward		62650	" "

The Cont.
 sanctioned
 as per this
 Order is
 Rs. 2150 at
 50 Rs. each

Contents
Remarks

Brought over 62650 " "			
<u>Part 14. Cost of 107 Tunnels</u>			
<u>of 1 vent of 3 feet on the</u>			
<u>Poonachy Chant.</u>			
45 Cys of Earthwork	" 2 " Cysd	5.10	" "
22 1/2 " of Dry stone work	" 12 " " "	17.12	" "
27 1/2 " of Curving stones	10 2 " " "	23.8	" "
		48.11	" "
Sundries &c		1.5	" "
Total for one Tunnel		50	" "
Total for 107 Tunnels		5350	" "

The Cont.
 sanctioned
 as per this
 Order is
 Rs. 2073
 at 100 Rs. each

Grand Total 68000 " "
 Deduct amount disallowed 655 " "
 Balance as sanctioned in this O. 67345 " "

Committed }
 5 June 1875 } Signed A. A. Hayne
 Range Officer

Signed W. W. Skirrow Col R.E.
 Superintending Engineer

No 155

Superintending Engineer's Office
Coimbatore 15 March 1875From
The Superintending Engineer
CoimbatoreTo
The Secretary to Government W.P.W.
Madras.

Sir, Adverting to G.O. No 21/20, dated 24th September 1874, I have the honor to submit, for sanction and provision of funds, a survey and estimate, for widening the Coimbatore bridge path to 12 feet from the Coimbatore saddle to the foot of Annamallai hills, bridging Chinnant and Chinnant Chinnant, and providing drains at all smaller stream crossings, amounting to Rs 68,000, as shown below:-

I	Widening Road	Rs. 49,850
II	Timber bridge across Chinnant stream of 3 vents each 25 feet span	Rs. 4,600
III	Do Do Do Chinnant do 1 vent of 25 feet span	Rs. 1,850
IV	9 Culverts of 2 vents of 6 feet span each at 180 Rs	Rs. 1,620
V	43 Do Do of 6 ft. span at 110 Rs	Rs. 4,730
VI	107 Do of 1 vent of 3 feet span at 50 Rs	Rs. 5,350
		<u>Rs. 68,000</u>

I have the honor to be,
 Sir,
 Your most obedient
 William Colonel C.
 Superintending Engineer
 Coimbatore.

No 39

Superintending Engineer's Office
 Coonoor June 14th, 1875
 Desd. 17th D.
 1519

From

The Superintending Engineer
 Coimbatore.

To

Offg.
 The Chief Engineer A.P.W.

Sir,

Encls.
 4 Plans.
 5 Estimates
 Nos 7, 8, 9, 10, & 11 of
 1875/76

With reference to your Memo.
 No 24, dated 27th May 1875, I have
 the honor to forward 4 plans and
 5 estimates amounting in the
 aggregate to Rs. 18,150, for con-
 structing the undermentioned bridges
 and tunnels on the road from
 Poona chyc addle to the foot of the
 Anamallay Hills:-

- 1 Constructing a timber platform
 bridge of 3 vents each of 25 feet
 span Rs 4,400
 - 2 — do — do do of 25 ft do — 1,870
 - 3 — do — 9 tunnels of 2 vents
 of 6 ft at 200 Rs each Rs 1,800
 - 4 — do — 43 tunnels of 1 vent of
 6 ft at 110 Rs each Rs 4,730
 - 5 — do — 107 do of 1 vent of 3 ft at
 50 Rs each Rs 5,350
- Rs. 18,150

D. N. 1875. Well
 done 17th 1875.
 The Chief Engineer
 Coimbatore
 I enclose.

Noted 15th March 1875
 Recd 16th March 1875

No 155

Encls. 2.

Enclosed for direction
 of provision of funds
 a sum of Rs 18,150
 and Rs 100 000
 for widening the
 Poona chyc addle
 road 1875

98-178 July 1875 No 2034

I have the honor to be,
 Sir,
 Your most obedt servt
 William Colonel R.
 Superintending Engineer
 Coimbatore.

No. 1.—ESTIM

Memo
 No 24

10/2/75

The Supg Engineer, Coimbatore
 is requested to be good enough
 to expedite his reply to the
 memorandum noted in the
 margin

(Signed) J. H. Major R.E.
 offg. Ch. Engr

Obtained
 27th May 1875

Memo No 344 27/5/75
 Requesting submission
 of the plans and estimates
 of the bridges and drains
 connected with the widening
 of the Ponachy saddle &
 to the foot of the Anna-
 mullay Hills

20.9.1874 Nov 189-190
 21. 20.9.1874 190-191
 22. 20.9.1874 191-192
 23. 20.9.1874 192-193
 24. 20.9.1874 193-194
 25. 20.9.1874 194-195
 26. 20.9.1874 195-196
 27. 20.9.1874 196-197
 28. 20.9.1874 197-198
 29. 20.9.1874 198-199
 30. 20.9.1874 199-200
 31. 20.9.1874 200-201
 32. 20.9.1874 201-202
 33. 20.9.1874 202-203
 34. 20.9.1874 203-204
 35. 20.9.1874 204-205
 36. 20.9.1874 205-206
 37. 20.9.1874 206-207
 38. 20.9.1874 207-208
 39. 20.9.1874 208-209
 40. 20.9.1874 209-210
 41. 20.9.1874 210-211
 42. 20.9.1874 211-212
 43. 20.9.1874 212-213
 44. 20.9.1874 213-214
 45. 20.9.1874 214-215
 46. 20.9.1874 215-216
 47. 20.9.1874 216-217
 48. 20.9.1874 217-218
 49. 20.9.1874 218-219
 50. 20.9.1874 219-220
 51. 20.9.1874 220-221
 52. 20.9.1874 221-222
 53. 20.9.1874 222-223
 54. 20.9.1874 223-224
 55. 20.9.1874 224-225
 56. 20.9.1874 225-226
 57. 20.9.1874 226-227
 58. 20.9.1874 227-228
 59. 20.9.1874 228-229
 60. 20.9.1874 229-230
 61. 20.9.1874 230-231
 62. 20.9.1874 231-232
 63. 20.9.1874 232-233
 64. 20.9.1874 233-234
 65. 20.9.1874 234-235
 66. 20.9.1874 235-236
 67. 20.9.1874 236-237
 68. 20.9.1874 237-238
 69. 20.9.1874 238-239
 70. 20.9.1874 239-240
 71. 20.9.1874 240-241
 72. 20.9.1874 241-242
 73. 20.9.1874 242-243
 74. 20.9.1874 243-244
 75. 20.9.1874 244-245
 76. 20.9.1874 245-246
 77. 20.9.1874 246-247
 78. 20.9.1874 247-248
 79. 20.9.1874 248-249
 80. 20.9.1874 249-250
 81. 20.9.1874 250-251
 82. 20.9.1874 251-252
 83. 20.9.1874 252-253
 84. 20.9.1874 253-254
 85. 20.9.1874 254-255
 86. 20.9.1874 255-256
 87. 20.9.1874 256-257
 88. 20.9.1874 257-258
 89. 20.9.1874 258-259
 90. 20.9.1874 259-260
 91. 20.9.1874 260-261
 92. 20.9.1874 261-262
 93. 20.9.1874 262-263
 94. 20.9.1874 263-264
 95. 20.9.1874 264-265
 96. 20.9.1874 265-266
 97. 20.9.1874 266-267
 98. 20.9.1874 267-268
 99. 20.9.1874 268-269
 100. 20.9.1874 269-270
 101. 20.9.1874 270-271
 102. 20.9.1874 271-272
 103. 20.9.1874 272-273
 104. 20.9.1874 273-274
 105. 20.9.1874 274-275
 106. 20.9.1874 275-276
 107. 20.9.1874 276-277
 108. 20.9.1874 277-278
 109. 20.9.1874 278-279
 110. 20.9.1874 279-280
 111. 20.9.1874 280-281
 112. 20.9.1874 281-282
 113. 20.9.1874 282-283
 114. 20.9.1874 283-284
 115. 20.9.1874 284-285
 116. 20.9.1874 285-286
 117. 20.9.1874 286-287
 118. 20.9.1874 287-288
 119. 20.9.1874 288-289
 120. 20.9.1874 289-290
 121. 20.9.1874 290-291
 122. 20.9.1874 291-292
 123. 20.9.1874 292-293
 124. 20.9.1874 293-294
 125. 20.9.1874 294-295
 126. 20.9.1874 295-296
 127. 20.9.1874 296-297
 128. 20.9.1874 297-298
 129. 20.9.1874 298-299
 130. 20.9.1874 299-300
 131. 20.9.1874 300-301
 132. 20.9.1874 301-302
 133. 20.9.1874 302-303
 134. 20.9.1874 303-304
 135. 20.9.1874 304-305
 136. 20.9.1874 305-306
 137. 20.9.1874 306-307
 138. 20.9.1874 307-308
 139. 20.9.1874 308-309
 140. 20.9.1874 309-310
 141. 20.9.1874 310-311
 142. 20.9.1874 311-312
 143. 20.9.1874 312-313
 144. 20.9.1874 313-314
 145. 20.9.1874 314-315
 146. 20.9.1874 315-316
 147. 20.9.1874 316-317
 148. 20.9.1874 317-318
 149. 20.9.1874 318-319
 150. 20.9.1874 319-320
 151. 20.9.1874 320-321
 152. 20.9.1874 321-322
 153. 20.9.1874 322-323
 154. 20.9.1874 323-324
 155. 20.9.1874 324-325
 156. 20.9.1874 325-326
 157. 20.9.1874 326-327
 158. 20.9.1874 327-328
 159. 20.9.1874 328-329
 160. 20.9.1874 329-330
 161. 20.9.1874 330-331
 162. 20.9.1874 331-332
 163. 20.9.1874 332-333
 164. 20.9.1874 333-334
 165. 20.9.1874 334-335
 166. 20.9.1874 335-336
 167. 20.9.1874 336-337
 168. 20.9.1874 337-338
 169. 20.9.1874 338-339
 170. 20.9.1874 339-340
 171. 20.9.1874 340-341
 172. 20.9.1874 341-342
 173. 20.9.1874 342-343
 174. 20.9.1874 343-344
 175. 20.9.1874 344-345
 176. 20.9.1874 345-346
 177. 20.9.1874 346-347
 178. 20.9.1874 347-348
 179. 20.9.1874 348-349
 180. 20.9.1874 349-350
 181. 20.9.1874 350-351
 182. 20.9.1874 351-352
 183. 20.9.1874 352-353
 184. 20.9.1874 353-354
 185. 20.9.1874 354-355
 186. 20.9.1874 355-356
 187. 20.9.1874 356-357
 188. 20.9.1874 357-358
 189. 20.9.1874 358-359
 190. 20.9.1874 359-360
 191. 20.9.1874 360-361
 192. 20.9.1874 361-362
 193. 20.9.1874 362-363
 194. 20.9.1874 363-364
 195. 20.9.1874 364-365
 196. 20.9.1874 365-366
 197. 20.9.1874 366-367
 198. 20.9.1874 367-368
 199. 20.9.1874 368-369
 200. 20.9.1874 369-370
 201. 20.9.1874 370-371
 202. 20.9.1874 371-372
 203. 20.9.1874 372-373
 204. 20.9.1874 373-374
 205. 20.9.1874 374-375
 206. 20.9.1874 375-376
 207. 20.9.1874 376-377
 208. 20.9.1874 377-378
 209. 20.9.1874 378-379
 210. 20.9.1874 379-380
 211. 20.9.1874 380-381
 212. 20.9.1874 381-382
 213. 20.9.1874 382-383
 214. 20.9.1874 383-384
 215. 20.9.1874 384-385
 216. 20.9.1874 385-386
 217. 20.9.1874 386-387
 218. 20.9.1874 387-388
 219. 20.9.1874 388-389
 220. 20.9.1874 389-390
 221. 20.9.1874 390-391
 222. 20.9.1874 391-392
 223. 20.9.1874 392-393
 224. 20.9.1874 393-394
 225. 20.9.1874 394-395
 226. 20.9.1874 395-396
 227. 20.9.1874 396-397
 228. 20.9.1874 397-398
 229. 20.9.1874 398-399
 230. 20.9.1874 399-400
 231. 20.9.1874 400-401
 232. 20.9.1874 401-402
 233. 20.9.1874 402-403
 234. 20.9.1874 403-404
 235. 20.9.1874 404-405
 236. 20.9.1874 405-406
 237. 20.9.1874 406-407
 238. 20.9.1874 407-408
 239. 20.9.1874 408-409
 240. 20.9.1874 409-410
 241. 20.9.1874 410-411
 242. 20.9.1874 411-412
 243. 20.9.1874 412-413
 244. 20.9.1874 413-414
 245. 20.9.1874 414-415
 246. 20.9.1874 415-416
 247. 20.9.1874 416-417
 248. 20.9.1874 417-418
 249. 20.9.1874 418-419
 250. 20.9.1874 419-420
 251. 20.9.1874 420-421
 252. 20.9.1874 421-422
 253. 20.9.1874 422-423
 254. 20.9.1874 423-424
 255. 20.9.1874 424-425
 256. 20.9.1874 425-426
 257. 20.9.1874 426-427
 258. 20.9.1874 427-428
 259. 20.9.1874 428-429
 260. 20.9.1874 429-430
 261. 20.9.1874 430-431
 262. 20.9.1874 431-432
 263. 20.9.1874 432-433
 264. 20.9.1874 433-434
 265. 20.9.1874 434-435
 266. 20.9.1874 435-436
 267. 20.9.1874 436-437
 268. 20.9.1874 437-438
 269. 20.9.1874 438-439
 270. 20.9.1874 439-440
 271. 20.9.1874 440-441
 272. 20.9.1874 441-442
 273. 20.9.1874 442-443
 274. 20.9.1874 443-444
 275. 20.9.1874 444-445
 276. 20.9.1874 445-446
 277. 20.9.1874 446-447
 278. 20.9.1874 447-448
 279. 20.9.1874 448-449
 280. 20.9.1874 449-450
 281. 20.9.1874 450-451
 282. 20.9.1874 451-452
 283. 20.9.1874 452-453
 284. 20.9.1874 453-454
 285. 20.9.1874 454-455
 286. 20.9.1874 455-456
 287. 20.9.1874 456-457
 288. 20.9.1874 457-458
 289. 20.9.1874 458-459
 290. 20.9.1874 459-460
 291. 20.9.1874 460-461
 292. 20.9.1874 461-462
 293. 20.9.1874 462-463
 294. 20.9.1874 463-464
 295. 20.9.1874 464-465
 296. 20.9.1874 465-466
 297. 20.9.1874 466-467
 298. 20.9.1874 467-468
 299. 20.9.1874 468-469
 300. 20.9.1874 469-470
 301. 20.9.1874 470-471
 302. 20.9.1874 471-472
 303. 20.9.1874 472-473
 304. 20.9.1874 473-474
 305. 20.9.1874 474-475
 306. 20.9.1874 475-476
 307. 20.9.1874 476-477
 308. 20.9.1874 477-478
 309. 20.9.1874 478-479
 310. 20.9.1874 479-480
 311. 20.9.1874 480-481
 312. 20.9.1874 481-482
 313. 20.9.1874 482-483
 314. 20.9.1874 483-484
 315. 20.9.1874 484-485
 316. 20.9.1874 485-486
 317. 20.9.1874 486-487
 318. 20.9.1874 487-488
 319. 20.9.1874 488-489
 320. 20.9.1874 489-490
 321. 20.9.1874 490-491
 322. 20.9.1874 491-492
 323. 20.9.1874 492-493
 324. 20.9.1874 493-494
 325. 20.9.1874 494-495
 326. 20.9.1874 495-496
 327. 20.9.1874 496-497
 328. 20.9.1874 497-498
 329. 20.9.1874 498-499
 330. 20.9.1874 499-500
 331. 20.9.1874 500-501
 332. 20.9.1874 501-502
 333. 20.9.1874 502-503
 334. 20.9.1874 503-504
 335. 20.9.1874 504-505
 336. 20.9.1874 505-506
 337. 20.9.1874 506-507
 338. 20.9.1874 507-508
 339. 20.9.1874 508-509
 340. 20.9.1874 509-510
 341. 20.9.1874 510-511
 342. 20.9.1874 511-512
 343. 20.9.1874 512-513
 344. 20.9.1874 513-514
 345. 20.9.1874 514-515
 346. 20.9.1874 515-516
 347. 20.9.1874 516-517
 348. 20.9.1874 517-518
 349. 20.9.1874 518-519
 350. 20.9.1874 519-520
 351. 20.9.1874 520-521
 352. 20.9.1874 521-522
 353. 20.9.1874 522-523
 354. 20.9.1874 523-524
 355. 20.9.1874 524-525
 356. 20.9.1874 525-526
 357. 20.9.1874 526-527
 358. 20.9.1874 527-528
 359. 20.9.1874 528-529
 360. 20.9.1874 529-530
 361. 20.9.1874 530-531
 362. 20.9.1874 531-532
 363. 20.9.1874 532-533
 364. 20.9.1874 533-534
 365. 20.9.1874 534-535
 366. 20.9.1874 535-536
 367. 20.9.1874 536-537
 368. 20.9.1874 537-538
 369. 20.9.1874 538-539
 370. 20.9.1874 539-540
 371. 20.9.1874 540-541
 372. 20.9.1874 541-542
 373. 20.9.1874 542-543
 374. 20.9.1874 543-544
 375. 20.9.1874 544-545
 376. 20.9.1874 545-546
 377. 20.9.1874 546-547
 378. 20.9.1874 547-548
 379. 20.9.1874 548-549
 380. 20.9.1874 549-550
 381. 20.9.1874 550-551
 382. 20.9.1874 551-552
 383. 20.9.1874 552-553
 384. 20.9.1874 553-554
 385. 20.9.1874 554-555
 386. 20.9.1874 555-556
 387. 20.9.1874 556-557
 388. 20.9.1874 557-558
 389. 20.9.1874 558-559
 390. 20.9.1874 559-560
 391. 20.9.1874 560-561
 392. 20.9.1874 561-562
 393. 20.9.1874 562-563
 394. 20.9.1874 563-564
 395. 20.9.1874 564-565
 396. 20.9.1874 565-566
 397. 20.9.1874 566-567
 398. 20.9.1874 567-568
 399. 20.9.1874 568-569
 400. 20.9.1874 569-570
 401. 20.9.1874 570-571
 402. 20.9.1874 571-572
 403. 20.9.1874 572-573
 404. 20.9.1874 573-574
 405. 20.9.1874 574-575
 406. 20.9.1874 575-576
 407. 20.9.1874 576-577
 408. 20.9.1874 577-578
 409. 20.9.1874 578-579
 410. 20.9.1874 579-580
 411. 20.9.1874 580-581
 412. 20.9.1874 581-582
 413. 20.9.1874 582-583
 414. 20.9.1874 583-584
 415. 20.9.1874 584-585
 416. 20.9.1874 585-586
 417. 20.9.1874 586-587
 418. 20.9.1874 587-588
 419. 20.9.1874 588-589
 420. 20.9.1874 589-590
 421. 20.9.1874 590-591
 422. 20.9.1874 591-592
 423. 20.9.1874 592-593
 424. 20.9.1874 593-594
 425. 20.9.1874 594-595
 426. 20.9.1874 595-596
 427. 20.9.1874 596-597
 428. 20.9.1874 597-598
 429. 20.9.1874 598-599
 430. 20.9.1874 599-600
 431. 20.9.1874 600-601
 432. 20.9.1874 601-602
 433. 20.9.1874 602-603
 434. 20.9.1874 603-604
 435. 20.9.1874 604-605
 436. 20.9.1874 605-606
 437. 20.9.1874 606-607
 438. 20.9.1874 607-608
 439. 20.9.1874 608-609
 440. 20.9.1874 609-610
 441. 20.9.1874 610-611
 442. 20.9.1874 611-612
 443. 20.9.1874 612-613
 444. 20.9.1874 613-614
 445. 20.9.1874 614-615
 446. 20.9.1874 615-616
 447. 20.9.1874 616-617
 448. 20.9.1874 617-618
 449. 20.9.1874 618-619
 450. 20.9.1874 619-620
 451. 20.9.1874 620-621
 452. 20.9.1874 621-622
 453. 20.9.1874 622-623
 454. 20.9.1874 623-624
 455. 20.9.1874 624-625
 456. 20.9.1874 625-626
 457. 20.9.1874 626-627
 458. 20.9.1874 627-628
 459. 20.9.1874 628-629
 460. 20.9.1874 629-630
 461. 20.9.1

Chief Engr's Memorandum

I have not been able to dispose of the Ponnichy Grant Estimate for want of Plans of the 2 Bridges for which I wrote to the Supy. Genl. (in Bombay), some time ago —

I think the Earthwork section of the Estimate may be passed for Rs 50000 in round numbers. I observe that it includes provision of a Catch-drain of 1/2 ft. wide in section throughout the entire length of the Ponnichy Road. The Blasting will be very heavy, it is

estimated to cost about
 $\frac{7}{10}$ th of the above sum.

I conclude, the drain
 to have been over estimat-
 ed both as to size and
 number; they run about
 1 to every 70 yards, and
 vary from 3 ft square to
 single & double beds of
 6 ft each - I do not con-
 sider this a kind of drain
 requiring so much pro-
 vision of drainage; much
 water, that runs across it
 can be directed by a good
 channel along the shaft
 head; and much can
 be turned aside over
 each zigzag. I estimate
 provision made in 200

No. 1.—ESTIMATE PARTICULARS.

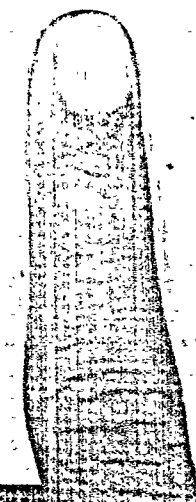
small instances for ledge
 8 ft drain close within
 a few yards of zigzags,
 over which the water to
 might be turned clear
 of the shaft - R 18 54 25
 of the shaft - R 18 54 25
 gives us all the minor
 drains required on the
 Cornwall shaft; and I
 think R 50 and R 100
 would be ample for the
 larger drains required.
 Allowing therefore the
 estimated number of
 drains their cost ought
 not to exceed

107 at R 25 =	R 2675-
43 at " 50 =	2150.
9 at " 100 =	900.
	<u>R 5725</u>

proved and brought forward in due order of
 precedence.

No yes no.

No.



By Engineer
 J. H. B. B. B.
 J. H. B. B. B.
 J. H. B. B. B.
 J. H. B. B. B.

As before said, the bridge
estimates, cannot be con-
sidered for want of their
Plans.

Amended R.O.
Chief Engineer R.O.

6.5.75

No. 1.—ESTIMATE PARTICULARS.

Main Budget Head to which chargeable.

Either Provincial or Local

Purpose of work as given by District Engi-
neer.

Widening the Ponachy bridge path to 12 feet from Ponachy Saddle to
the foot of the Annamallai Hills & providing bridges.

Original sanction for the preparation of the
detailed estimate. Date and number sanction-
ing and Public Works Department.

G.O. no: 848 of 25 March 1874.

Amount of present estimate and its district
number.

Rs. 68,000. no: 43 of 1874/75

Budget head to which chargeable if sanc-
tioned, (in detail.)

Communications

Provision has been made in the Budget of
in anticipation.

(Yes or no.)

No.

Funds can be made available during the
current year.

(Yes or no, and state how in former case.)

No.

Brought forward as urgent.

(Yes or no, and if former state by who.)

No.

Number on last revised list of works ap-
proved and brought forward in due order of
precedence.

No

yes

no.

No.

DOCUMENTS IN FILE.

From District Engineer—*Bombay*

1 Covering letter No. 155, date 15 March 1875
Widening Pouchy bridge path.

~~1 Letter from Range Officer, No. 155~~

4 Abstract
 1 Detailed Estimate.

~~1 Abstract do.~~

1 Plan.

~~1 Specification Report.~~

From Office—

Original sanction, No. 848, date 25 March 1875
 for detailed estimate preparation.

Orders and Proceedings.	No.	Date.	Under P. W. D. C. O.
P. W. Department	1556	9/11/74	No. Date.
Public do.	1511	2/6/74	
	1531	12/1/75	
	156	23/1/74	
	848	26/3/74	
	976	16/6/74	
	224	26/1/74	
	519	12/1/74	
	363	16/7/74	
	187	23/1/74	
	574	1/2/75	
	210	14/1/74	629 24/7/75.
Public do.	1366	7/1/74	136 24/1/74
No. of Recs. do.	1912	22/7/74	2720 24/3/75

Public Works Dept.
1875

Memorandum.

It was remarked by General Walker in regard to this estimate that the drains had been over estimated both as to size and number, one being provided about every 70 yards, dimensions varying from 3 feet square to single and double vents of 6 feet each. It was not considered that so much provision for drainage was requisite on this kind of shaft, as much of the water that now crosses it can be diverted by a good channel along the shaft head, and much turned aside over each zigzag, and it was observed that in general instances provision was made for 6 feet drains within a few yards of zigzags over which the water might be turned clear of the shaft.

As the minor drains on the common shaft cost from 18 to 25 Rupees each it was proposed to fix the latter amount in this instance for small drains,

and

and Rs. 50 and Rs. 100 each for the larger drains. The cost of the drains would thus stand as follows:-

9 at 100 Rs. =	Rs. 900
43 at 50 " =	" 2150
107 at 25 " =	" 2675
	<u>Rs. 5725</u>

and the estimate would be reduced by Rs. 6155.

Ootacamund
30th June 1975

Yr. a/cnt Major R.H.
Offy Chief Engineer.

26/7/75
26/7/75

Civil Works 6

Mr. W. 11/2

Proceedings of the Madras Govt. Read the following:-

From the Superintendence, { H.E. No. 155 dated 15 March 1975 }
Coimbatore.

Do. Do. (— 39 dated 14th June 1975)

Memo by the Offy. Chief Engineer, dated 30 June 1975
g.O. no. 2034 of 17th July 1975

With the above letters the Superintending Engineer, Coimbatore, submits an estimate amounting to Rs. 68,000 for widening the bridle path from the Ponachy Saddle to the foot of the Annamalai Hills to 12 feet, and bridging all streams.

2. The items of the estimate are as follows:-

Follows:-

Follows:-

Widening Road Rs. 49,850
 Bridge over Chinnaur. 4,400
 Do over Chinn Chinnaur. 1,870
 9 Tunnels of 2 Vents at } Rs. 200 each } 1,800
 43 do. 2 Vents at 110 each - 4,730
 107 do. 1 do. 50. - 5,350

+ vide 3. 1. 1. 1. 1.

3. If the three last items are reduced as suggested by the Chief Engineer, the amount of the estimate will be reduced to Rs 61,845 at which it is sanctioned.

4. As no funds are now available for the work, application must be made for an allotment in the Provincial Budget for 1876/77.

Ld

Suppl. Suppl. Combustion 75
 Cont. Suppl. - 25
 Rev. Dept - 16
 Int. Dept - 16
 Total - 59

22 Aug 1876

Audited & sanctioned

GOVT. OF MADRAS.
PUBLIC WORKS.

Date

Issued

Recd.

Encl.

G. O.

1875, No.

No.

It is a matter of fact that the
the Hon. Secy. to the Govt.
of the Madras Presidcy
has been appointed to the
position of the Secy. to the
Govt. of the Madras Presidcy
and the Hon. Secy. to the Govt.
of the Madras Presidcy has been
appointed to the position of the
Secy. to the Govt. of the Madras
Presidcy.